

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
28 March 2002 (28.03.2002)

PCT

(10) International Publication Number  
**WO 02/24238 A1**

(51) International Patent Classification<sup>7</sup>: A61L 9/12

(21) International Application Number: PCT/IB01/01696

(22) International Filing Date:  
18 September 2001 (18.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

UD2000A000173

20 September 2000 (20.09.2000) IT

(71) Applicant and

(72) Inventor: DATENA, Andrea [IT/IT]; Piazza Berengario,  
3/B, I-33100 Udine (IT).

(74) Agent: PETRAZ, Gilberto; GLP Srl, Piazzale Cavedalis,  
6/2, I-33100 Udine (IT).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI,  
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,  
ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,  
TG).

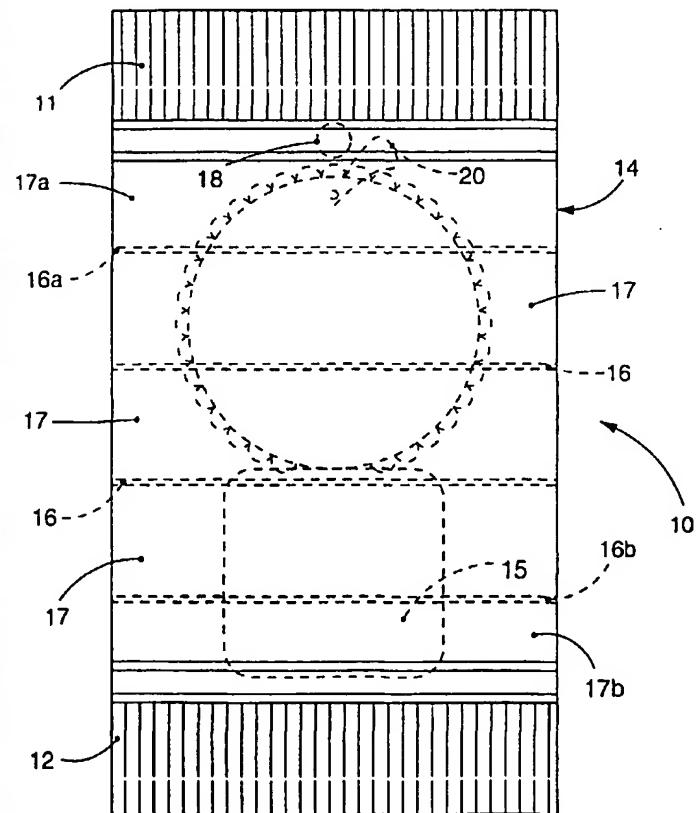
Published:

— with international search report

[Continued on next page]

(54) Title: PLASTIC CASE FOR SOLID DEODORANTS

**WO 02/24238 A1**



(57) Abstract: Case (10) for solid deodorants (15) consisting of a substantially closed envelope comprising a plurality of sections (17) able to be individually and sequentially removed in order to progressively uncover different parts of the solid deodorant (15).



- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

"PLASTIC CASE FOR SOLID DEODORANTS"

\* \* \* \* \*

FIELD OF THE INVENTION

The invention concerns a case able to contain solid deodorants, for example of the type for motor vehicles, and, due to its configuration and how it progressively opens, able to condition the duration and perfume level of the deodorant itself.

BACKGROUND OF THE INVENTION

10 The state of the art includes plastic cases able to contain solid deodorants for environments in general, and particularly for motor vehicles. Such cases are usually formed by an envelope of plastic material, preferentially cellulose, generally transparent; for as long as it remains 15 closed and sealed, the envelope encloses the deodorant, keeping the fragrance and perfume intact.

This envelope is normally closed at the upper and lower end by welds; usually there is also a third vertical weld which connects the two end welds. When the deodorant is 20 being used, the envelope is opened and the deodorant is removed and placed in the environment to be perfumed, for example inside a vehicle.

This entails the disadvantage that, in a short time, the deodorant loses a large part of its perfume, which limits 25 the duration thereof and makes it uneconomic and ineffective to use.

To solve this problem, the state of the art provides various solutions. One of these provides to prepare in the envelope a removal aperture defined by pre-cut segments. By 30 removing a section of envelope along these segments, an aperture is formed which allows the partial removal of the solid deodorant contained therein; then, by pulling the deodorant little by little from the envelope, according to a

pre-set time program (daily, weekly or otherwise), it is possible to manage the intensity of the deodorizing action and prolong its duration in substantially constant conditions.

5 This technique does not completely solve the problem, however, in that the removal of the deodorant is not very practical and effective; the deodorant can be damaged when it is partly extracted; the envelope remains attached, partly outside the deodorant, which is anti-aesthetic, and  
10 can slip and fall inside the interior to be perfumed; moreover, the program according to which the deodorant is removed over time, even when it is identified on the outside of the envelope by signs or marks, is very difficult to follow and causes inaccuracies and difficulties for the  
15 user. Because of these disadvantages, the user often removes the deodorant completely from the envelope without following the program of progressive use.

The present Applicant has devised and embodied this invention to overcome the shortcomings of the state of the  
20 art and to obtain further advantages.

#### SUMMARY OF THE INVENTION

The invention is set forth and characterized in the main claim, while the dependent claims describe other innovative characteristics of the invention.

25 The main purpose of the invention is to achieve a case for solid deodorants which will be easy to use, simple to make, low cost, and which will allow to effectively program the delivery of the perfume during a period of time, prolonging the effective use of the deodorant.

30 According to the invention the case for solid deodorants comprises a containing envelope, for example comprising a plastic film welded and sealed in correspondence with its defined perimeter zones. This case comprises a plurality of

sections, reciprocally adjacent and connected by means which allow the separation and selective detachment of each of them with respect to the other sections of the envelope.

A first embodiment provides that the join between two adjacent sections is defined by a connecting strip associated with the film in correspondence with the zone of separation between said two sections, and arranged along a substantial part of the perimeter of the envelope. Each of the strips has a first end attached in correspondence with a fixed point of the envelope, while the other end is free; by pulling the free end, the join between the two ends is removed along the travel of the strip and the section which is not constrained is detached.

When the deodorant is being used, the case is opened by removing an end section of the envelope, the upper end section or the lower end section, and the deodorant is attached or hung up in the environment to be perfumed. After the period of pre-set use, when the exposed part of the deodorant has substantially exhausted its deodorizing function, a section immediately adjacent is removed, exposing a new segment of deodorant to the outside, and so on, until all the sections of the envelope have been removed.

According to another embodiment, the sections are constrained together by means of pre-cut segments, which can possibly be identified by zones of preferential tearing.

According to yet another embodiment, the sections are delimited by strips and pre-cut segments.

#### BRIEF DESCRIPTION OF THE DRAWINGS

These and other characteristics of the invention will be apparent from the following description of a preferential form of embodiment, given as a non-restrictive example with reference to the attached drawings wherein:

Fig. 1 is a view of one side of the case for solid deodorants according to the invention in the closed condition;

Fig. 2 is a rear view of the case in Fig. 1;

Fig. 3 shows the case in Fig. 1 with the solid deodorant  
5 partly removed;

Fig. 4 shows a variant of Fig. 1.

#### DETAILED DESCRIPTION OF A PREFERENTIAL EMBODIMENT

With reference to the attached Figures, a case for solid deodorants 10 according to the invention is formed by a film  
10 of plastic material 14 bent so as to encircle and contain a solid deodorant 15, for example of the type for the interiors of motor vehicles. At its two ends, this case 10 has two welds 11 and 12 respectively at the top and at the base; moreover, a third weld 13, perpendicular to the first  
15 two, is able to clamp together the two edges, still free, of the plastic film 14. These welds 11, 12 and 13 form two surfaces, a front surface and a rear surface on which the third weld 13 lies. The front surface is provided with a circumference of preferential breakage 18, possibly covered  
20 by an adhesive tongue, able to allow a hook 20 to emerge by means of which the deodorant 15 can be attached inside the environment to be perfumed.

In the embodiment shown in Figs. 1-3, this case 10 comprises a plurality of sections 17, adjacent to each other  
25 and respectively connected by means of strips 16, made of more resistant plastic material than the film 14. In this case, the strips 16 are arranged parallel to each other and with respect to the welds 11 and 12 and the sections 17 are all the same size. The strips 16 are arranged along the  
30 inner perimeter of the case 10 and are attached, at one end, to the third weld 13, whereas the other end is unconstrained and emerges from the case 10 so that it can easily be gripped by the user.

The case 10 as described heretofore is used as follows.

After attaching the deodorant 15 by removing the hook 20 through the hole which is formed by pressing on the circumference of preferential breakage 18, the lower end 5 section 17b is removed (Fig. 3), by acting on the relative strip 16b, and in this way a lower segment of the solid deodorant 15 is exposed to the outside. When this lower segment has substantially completed its deodorizing action, the section immediately adjacent is removed, and so on 10 according to the temporal program to remove the deodorant 15 or the level of perfume desired.

According to a variant, the upper end section 17a is removed first, the remaining part of the case 10 being constrained to the deodorant 15 either by means of drops of 15 glue or by welds or otherwise.

According to the variant shown in Fig. 4, the sections 17 are defined by pre-holed segments 22, which do not allow the perfume to evaporate, to each of which an indentation of preferential tearing 21 is associated.

20 In the preferential embodiment of the variant shown in Fig. 4, the indentations 21 are made on the third weld 13 so that there is no passage between the inside and the outside of the case and hence no perfume evaporates.

It is obvious however that modifications and/or additions 25 can be made to the plastic case 10 for deodorants as described heretofore without departing from the spirit and scope of the invention.

It is also obvious that, although the invention has been described with reference to specific examples, a skilled 30 person in the art shall certainly be able to achieve many other equivalent forms of plastic case for deodorants or suchlike, all of which shall come within the field and scope of this invention.

It is also obvious that, although the invention has been described heretofore with reference to solid deodorants, it can be applied to other products which need a progressive opening, extended over time.

## CLAIMS

- 1 - Case for solid deodorants (15) consisting of a substantially closed envelope, characterized in that it comprises a plurality of sections (17) able to be individually and sequentially removed in order to progressively uncover different parts of the solid deodorant (15).
- 2 - Case as in claim 1, characterized in that said sections (17) are reciprocally connected by opening means.
- 3 - Case as in claim 2, characterized in that said opening means comprise a plurality of strips (16) arranged along at least part of the perimeter of the join zone between said adjacent sections (17).
- 4 - Case as in claim 3, characterized in that said strips (16) have a first end constrained to a fixed point of the case and the other end accessible for tearing.
- 5 - Case as in claim 2, characterized in that said opening means comprise a plurality of pre-cut segments (22).
- 6 - Case as in claim 5, characterized in that each of said pre-cut segments (22) is associated with a relative indentation of preferential tearing (21).
- 7 - Case as in claim 6 comprising at least a vertical weld (13), characterized in that said indentation of preferential tearing (21) is made on said vertical weld (13).
- 8 - Case as in any claim from 2 to 7 inclusive, characterized in that said opening means comprise the association between said strips (16) and said pre-cut segments (22).

1/2

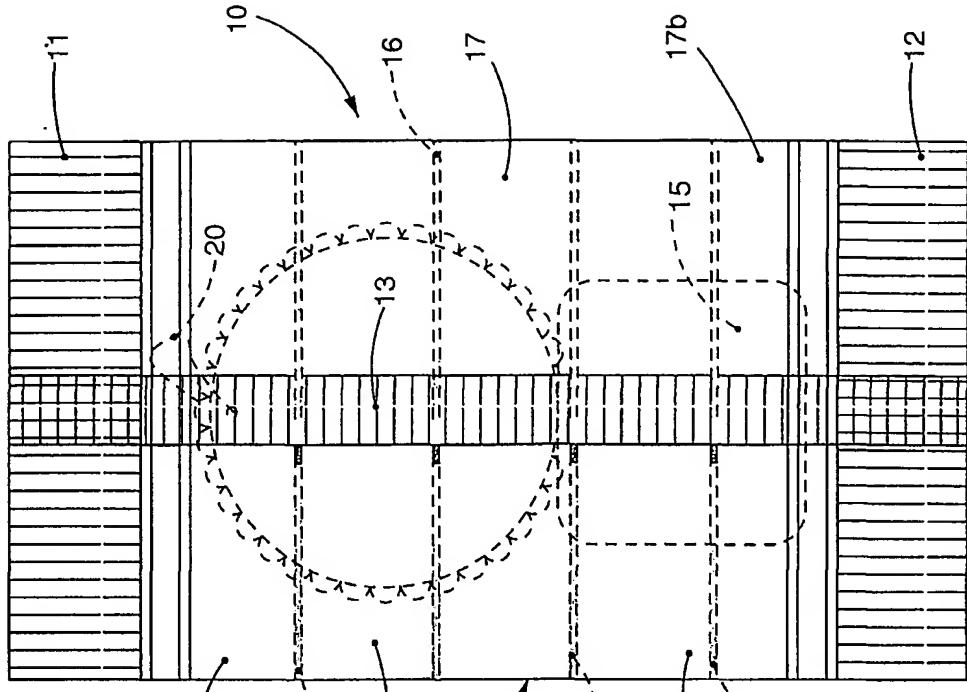


fig. 2

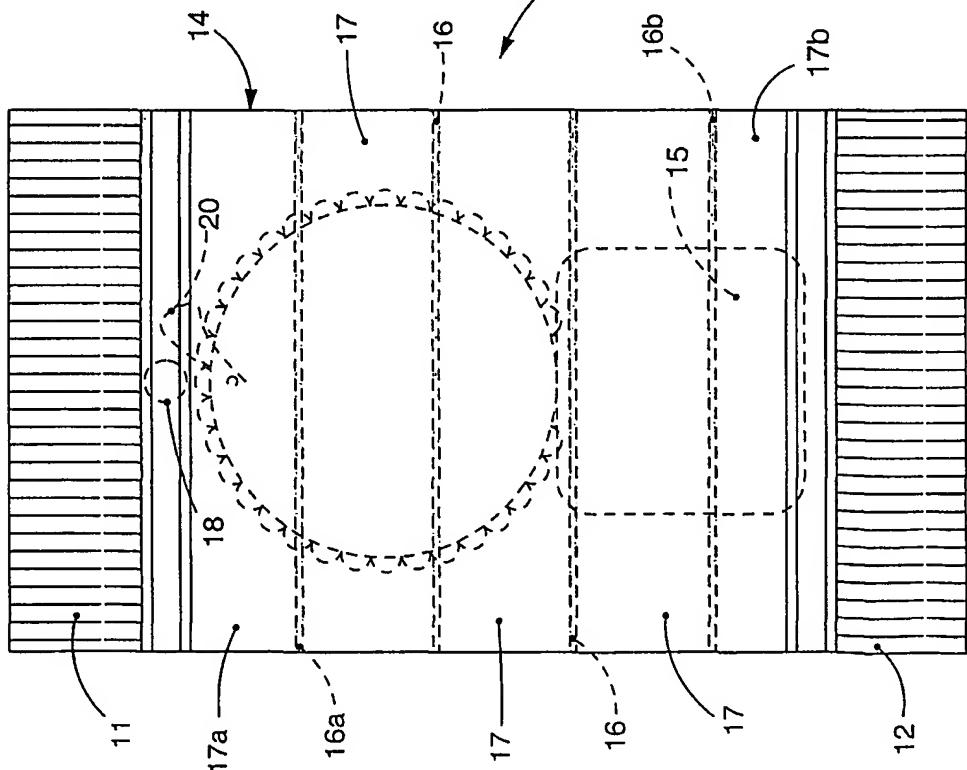


fig. 1

2/2

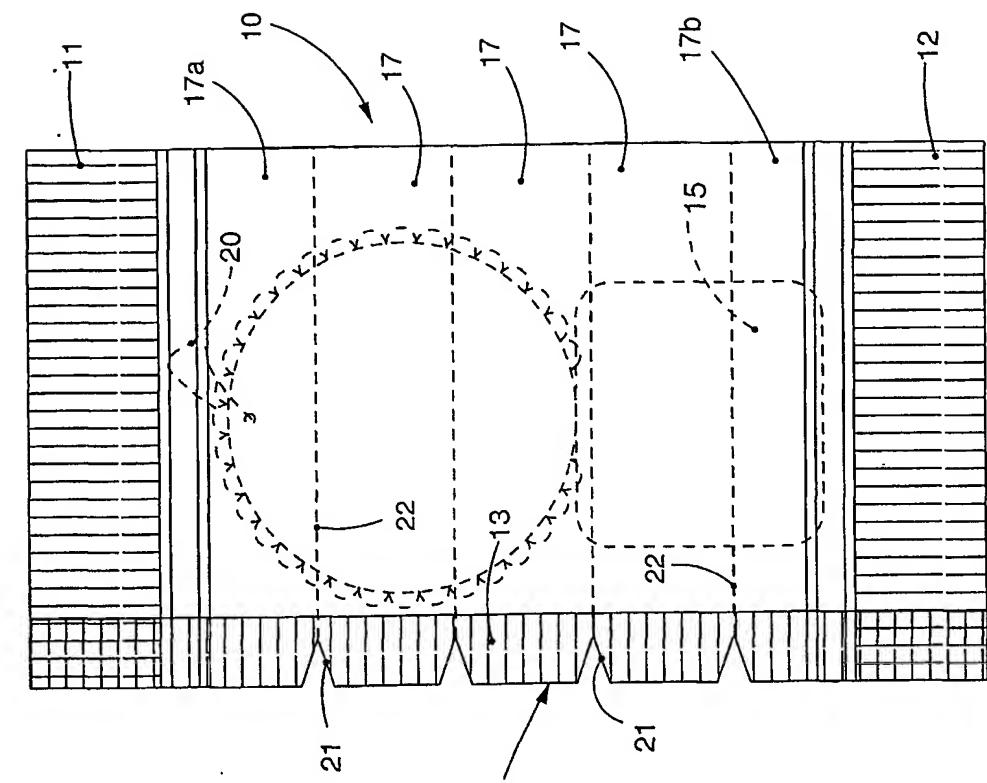


fig. 4

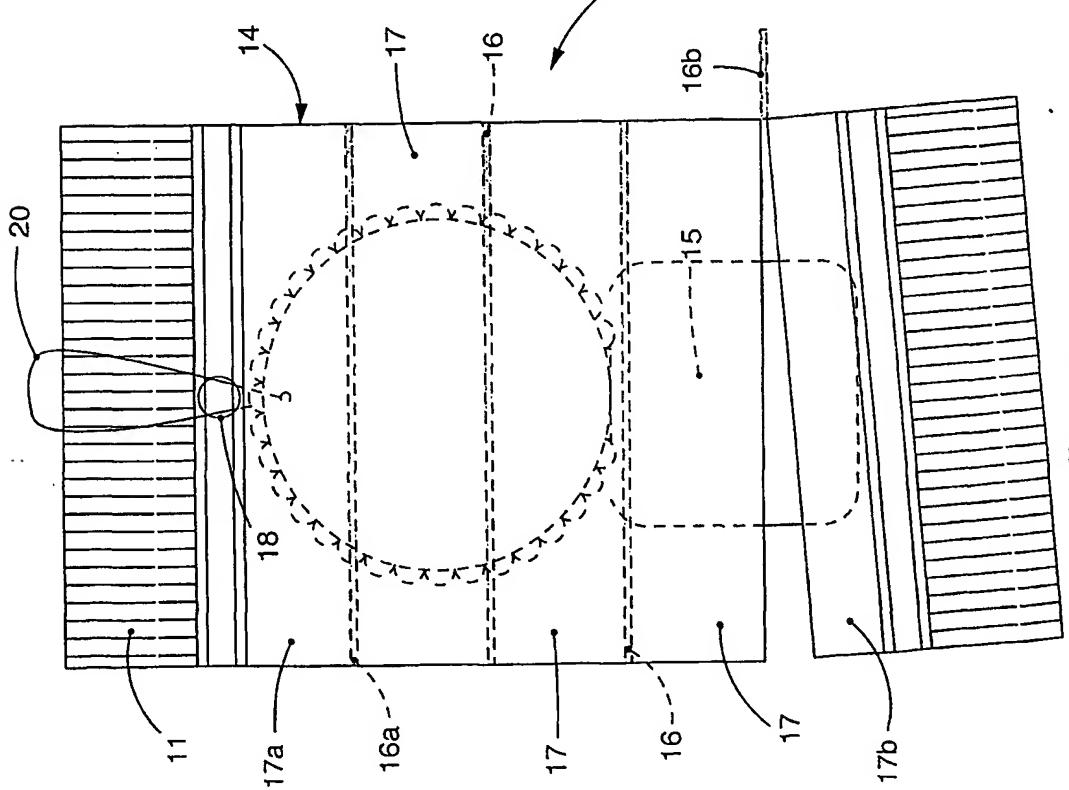


fig. 3

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 01/01696A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61L9/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61L A41G B65D B60H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 012 643 A (BARLOW IAN JOHN ET AL) 11 January 2000 (2000-01-11) abstract column 1, line 9-65 column 2, line 1-10, 48-54 column 3, line 6-20 claims; figures ----	1-8
A	US 5 383 598 A (STYLES ROBERT L) 24 January 1995 (1995-01-24) column 1, line 26-41 ----	1
A	US 3 065 915 A (JULIUS SAMANN) 27 November 1962 (1962-11-27) column 1, line 49-79 column 2, line 14-33 figures 1,2 ----	1
		-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the International filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

15 January 2002

Date of mailing of the International search report

23/01/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Böhm, I

BEST AVAILABLE COPY

## INTERNATIONAL SEARCH REPORT

Inten	nal Application No
PC1/1B 01/01696	

## C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 277 024 A (SPECTOR DONALD) 7 July 1981 (1981-07-07) abstract column 1, line 5-7, 40-49 column 2, line 36 -column 3, line 9 claims; figures ----	1-8
A	US 5 503 332 A (GLENN SUSA) 2 April 1996 (1996-04-02) claims ----	1
A	WO 93 09818 A (WITTE STEFAN) 27 May 1993 (1993-05-27) abstract claims; figures ----	1
A	FR 2 717 393 A (JEAN MARCEL) 22 September 1995 (1995-09-22) abstract claims ----	1
A	US 5 439 172 A (COMYN JOHN ET AL) 8 August 1995 (1995-08-08) column 1, line 15-26 claims ----	1
A	US 4 961 493 A (KAIHATSU NOBORU) 9 October 1990 (1990-10-09) claims ----	1
A	US 4 746 567 A (ZELTER JEAN-CLAUDE E) 24 May 1988 (1988-05-24) claims ----	1
A	EP 0 436 838 A (FREYTAG VON LORINGHOVEN ANDREA) 17 July 1991 (1991-07-17) column 2, line 34 -column 3, line 48 ----	1
A	US 5 556 030 A (PAUL LEONARD) 17 September 1996 (1996-09-17) column 1, line 23-47 claims; figures ----	1
A	EP 0 888 781 A (WEBER DRUCK & KARTONAGE AG) 7 January 1999 (1999-01-07) abstract ----	1

BEST AVAILABLE COPY

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

 Inter  
nal Application No  
**PCT/IB 01/01696**

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6012643	A	11-01-2000	AU EP WO	1280497 A 0876163 A1 9720581 A1	27-06-1997 11-11-1998 12-06-1997
US 5383598	A	24-01-1995	NONE		
US 3065915	A	27-11-1962	NONE		
US 4277024	A	07-07-1981	US	4283011 A	11-08-1981
US 5503332	A	02-04-1996	NONE		
WO 9309818	A	27-05-1993	SE AU SE WO	469108 B 2959192 A 9103311 A 9309818 A1	17-05-1993 15-06-1993 12-03-1993 27-05-1993
FR 2717393	A	22-09-1995	FR	2717393 A1	22-09-1995
US 5439172	A	08-08-1995	US AT AU AU BR CA DE DE DK EP ES WO GB GR HK JP JP SG	5341992 A 148311 T 688288 B2 5569594 A 9307514 A 2149118 A1 69307922 D1 69307922 T2 670685 T3 0670685 A1 2100034 T3 9412072 A2 2276820 A ,B 3022556 T3 1003975 A1 8503405 T 2767653 B2 44806 A1	30-08-1994 15-02-1997 12-03-1998 22-06-1994 31-08-1999 09-06-1994 13-03-1997 05-06-1997 24-02-1997 13-09-1995 01-06-1997 09-06-1994 12-10-1994 31-05-1997 13-11-1998 16-04-1996 18-06-1998 19-12-1997
US 4961493	A	09-10-1990	FR	2640858 A1	29-06-1990
US 4746567	A	24-05-1988	FR EP JP	2592409 A1 0230829 A1 62223400 A	03-07-1987 05-08-1987 01-10-1987
EP 0436838	A	17-07-1991	DE EP	8914575 U1 0436838 A1	11-04-1991 17-07-1991
US 5556030	A	17-09-1996	US AU AU BR CA CN EP JP NZ WO US	5372303 A 690946 B2 1211995 A 9408254 A 2177078 A1 1141596 A 0732946 A1 9506279 T 277179 A 9515772 A1 5611486 A	13-12-1994 07-05-1998 27-06-1995 27-05-1997 15-06-1995 29-01-1997 25-09-1996 24-06-1997 24-02-1997 15-06-1995 18-03-1997

**BEST AVAILABLE COPY**

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No  
PCT/IB 01/01696

Patent document cited in search report	Publication date		Patent family member(s)		Publication date
US 5556030	A		US 5782409 A ZA 9409351 A		21-07-1998 16-11-1995
EP 0888781	A	07-01-1999	EP 0888781 A2		07-01-1999

**BEST AVAILABLE COPY**